

IN THE CLAIMS:

Please amend Claims 1-3, 6, 8, 11-13, 16, 18 and 22 as follows. Please add new Claims 23 and 24 as follows.

1. (Currently Amended) An information processing apparatus comprising:
acquisition means for acquiring an input coordinate sequence generated by sampling a handwritten input pattern at predetermined intervals;
line segment conversion means for converting a pattern expressed by the input coordinate sequence into line segments by approximating the pattern by coupling a plurality of line segments;
generation means for generating angle distribution data on the basis of directions of the line segments obtained by said line segment conversion means; and
matching means for executing a matching process of a pattern ~~on the basis of~~ by comparing the angle distribution data generated by said generation means with angle distribution data of a standard pattern.

2. (Currently Amended) The apparatus according to claim 1, further comprising:
registration means for registering ~~[[a]]~~ the angle distribution of the standard pattern on the basis of the angle distribution data generated by said generation means, and
wherein said matching means discriminates similarity of the handwritten input pattern using the angle distribution data of the standard pattern registered by said registration means.

3. (Currently Amended) The apparatus according to claim 1, wherein said generation means comprises:

setting means for setting ~~as an angle of~~ a reference line ~~a line segment having a predetermined angle~~ with respect to a horizontal direction, the angle of the reference line being determined on the basis of the input coordinate sequence, and

said generation means generates the angle distribution data by calculating angles the respective line segments obtained by said line segment conversion means make with the reference line.

4. (Original) The apparatus according to claim 3, wherein said setting means sets a line segment that connects start and end coordinates of the input coordinate sequence as the reference line.

5. (Original) The apparatus according to claim 3, wherein said generation means generates the angle distribution data on the basis of angle division positions make with the reference line, the division positions being obtained by equally dividing a total line segment length as a sum of lengths along line segments of all line segments obtained by said line segment conversion means.

6. (Currently Amended) The apparatus according to claim ~~[[1]]~~ 2, wherein said registration means registers angle distribution data defined by average angles at respective positions of a plurality of angle distribution data obtained from a plurality of input coordinate sequences.

7. (Original) The apparatus according to claim 1, wherein said acquisition means acquires an input coordinate sequence using a digitizer.

8. (Currently Amended) The apparatus according to claim ~~[[1]]~~ 2, wherein said registration means comprises:

indeterminate region extraction means for extracting portions where deviations of distribution values exceed a predetermined value from a plurality of angle distribution data obtained for a plurality of input coordinate sequences as indeterminate regions; and

angle distribution data generation means for generating standard angle distribution data based on the plurality of angle distribution data, and

said registration means registers as the standard patterns information indicating the indeterminate regions extracted by said indeterminate region extraction means and the standard angle distribution data.

9. (Original) The apparatus according to claim 8, wherein said matching means discriminates similarity with a handwritten input pattern using the angle distribution data registered by said registration means except fo the indeterminate regions.

10. (Original) The apparatus according to claim 8, wherein said angle distribution data generation means generates standard angle distribution data using average values of angle distribution values in the plurality of angle distribution data.

11. (Currently Amended) An information processing method comprising:
the acquisition step of acquiring an input coordinate sequence generated by sampling an handwritten input pattern at predetermined intervals;
the line segment conversion step of converting a pattern expressed by approximating the pattern by coupling a plurality of line segments;
the generation step of generating angle distribution data on the basis of directions of the line segments obtained in the line segment conversion step; and
the matching step of executing a matching process of a pattern ~~on the basis of~~ by comparing the angle distribution data generated in the generation step with angle distribution data of a standard pattern.

12. (Currently Amended) The method according to claim 11, further comprising:
the registration step of registering ~~[[a]]~~ the angle distribution of the standard pattern on the basis of the angle distribution data generated in the generation step, and
wherein the matching step includes the step of discriminating similarity of the handwritten input pattern using the angle distribution data of the standard pattern registered in the registration step.

13. (Currently Amended) The method according to claim 11, wherein the generation step comprises:

the setting step of setting ~~[[as]]~~ an angle of a reference line ~~a line segment~~
~~having a predetermined angle~~ with respect to a horizontal direction, the angle of the
reference line being determined on the basis of the input coordinate sequence, and

the generation step includes the step of generating the angle distribution data
by calculating angles the respective line segments obtained in the line segment conversion
step make with the reference line.

14. (Original) The method according to claim 13, wherein the setting step
includes the step of setting a line segment that connects start and end coordinates of the
input coordinate sequence as the reference line.

15. (Original) The method according to claim 13, wherein the generation step
includes the step of generation the angle distribution data on the basis of angles division
positions make with the reference line, the division positions being obtained by equally
dividing a total line segment length as a sum of lengths along line segments of all line
segments obtained in the line segment conversion step.

16. (Currently Amended) The method according to claim ~~[[11]]~~ 12, wherein
the registration step includes the step of registering angle distribution data defined by
average angles at respective positions of a plurality of angle distribution data obtained from
a plurality of input coordinate sequences.

17. (Original) The method according to claim 11, wherein the acquisition step includes the step of acquiring an input coordinate sequence using a digitizer.

18. (Currently Amended) The method according to claim ~~[[11]]~~ 12, wherein the registration step comprises:

the indeterminate region extraction step of extracting portions where deviations of distribution values exceed a predetermined value from a plurality of angle distribution obtained for a plurality of input coordinate sequences as indeterminate regions; and

the angle distribution data generation step of generating standard angle distribution data based on the plurality of angle distribution data, and

the registration step includes the step of registering as the standard pattern information indicating the indeterminate regions extracted in the indeterminate region extraction step and the standard angle distribution data.

19. (Original) The method according to claim 18, wherein the matching step includes the step of discriminating similarity with a handwritten input pattern using the angle distribution data registered in the registration step except for the indeterminate regions.

20. (Original) The method according to claim 18, wherein the angle distribution data generation step includes the step of generating standard angle distribution

data using average values of angle distribution values in the plurality of angle distribution data.

21. (Original) A storage medium that stores a control program for making a computer implement a method cited in claim 11.

22. (Currently Amended) A computer program embodied in a computer readable medium, that comprises program codes for making a computer implement a method cited in claim 11.

23. (New) The apparatus according to claim 1, wherein if the handwritten input pattern is written by a plurality of strokes, said acquisition means acquires the input coordinate sequence by sampling a pattern generated by interpolating a predetermined line between the strokes.

24. (New) The method according to claim 11, wherein if the handwritten input pattern is written by a plurality of strokes, said acquisition step acquires the input coordinate sequence by sampling a pattern generated by interpolating a predetermined line between the strokes.